SANYO CE25/28GN1

MODEL

SERVICE MANUAL

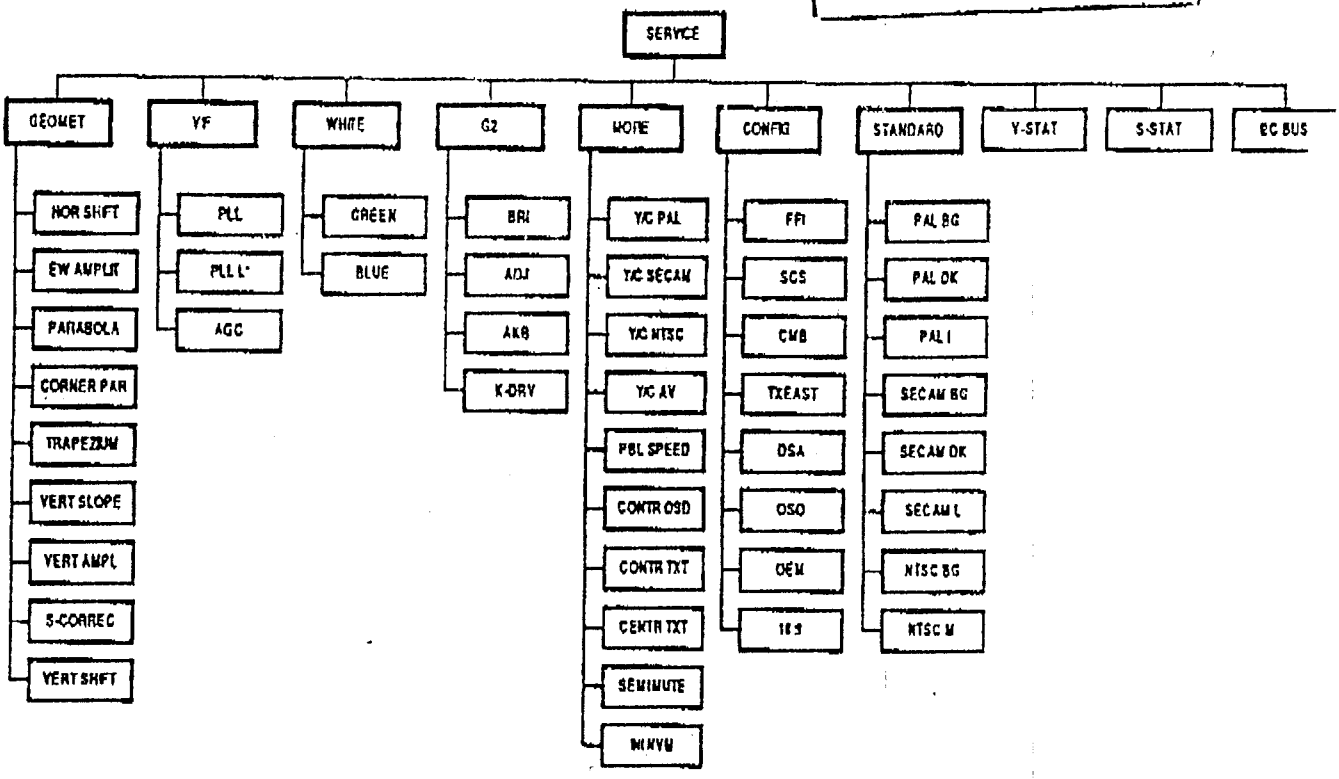
Ref Europe

6. SERVICE MENU

The service menu is acceded by pushing the front key "VOL-" and simultaneously the teletext green key from the remote control. Once the service menu appears the TV set is in SERVICE mode. The active keys (local or remote) in service mode are: VOL-, VOL+, P-, P+, MENU and numbers. The service menu is a two level structure as show in the diagram below.

- The keys P+ and P- allow to navigate through the options in the active menu.
- The key VOL+ opens the second level menu if it is available. If there is a highlighted adjustment, the VOL- and VOL+ keys allow to change it.
- The key MENU goes up one level menu. If the active menu is the main one, it exits the service mode.
- The number keys allow the adjustment direct entry.
- It exists the SERVICE mode by pushing others keys.

PRELIMINARY



Adjustment	Meaning	Range	Initial value	Suggested value
HOR SHIFT	Horizontal phase	0 a 63	37	-
EW AMPLIT	Horizontal width	0 a 63	57	- Irrelevant in 90º deflection models
PARABOLA	E/W correction	0 a 63	38	- Irrelevant in 90º deflection models
CORNER PAR	E/W corner correction	0 a 63	30	- Irrelevant in 90º deflection models
TRAPEZIUM	Trapezium correction	0 a 63	21	- Irrelevant in 90º deflection models
VERT SLOPE	Ramp generator amplitude	0 a 63	36	-
VERT AMPL	Vertical amplitude	0 a 63	40	-
S-CORREC	Vertical S-correction	0 a 63	18	-
VERT SHIFT	Vertical centre	0 a 63	36	-
PLL	PLL of video IF	0 a 63	80	80 (imperative)
PLL L'	PLL of video IF in L' system	0 a 63	80	80 (imperative)
AGC	Automatic gain control	0 a 63	16	-
GREEN	White point, green gain	0 a 63	40	-
BLUE	White point, blue gain	0 a 63	36	-
BRI	G2 adjust brightness level	0 a 63	32	0 if cut-off = 160V 5 if cut-off = 150V 32 if cut-off = 130V

Adjustment	Meaning	Range	Initial value	Suggested value
ADJ	Service Line Adjust	-	-	-
AKB	Enable/Disable AKB servo	ON/OFF	ON	ON
K-DRV	RGB Drive	0 a 7	5	5 in Ph1 110º 4 in 90º
Y/C PAL	PAL Phase luma-croma	0 a 15	03	03 in models PAL B/G 110º Irrelevant in 90º models
Y/C SECAM	SECAM Phase luma-croma	0 a 15	00	00 Irrelevant in 90º models
Y/C NTSC	NTSC Phase luma-croma	0 a 15	03	03 Irrelevant in 90º models
Y/C AV	AV inputs Phase luma-croma	0 a 15	10	10 Irrelevant in 90º models
PBL SPEED	Contrast reduction speed when FBL acts	0 a 63	9	9 in 100º models 18 in 90º models
CONTR OSD	OSD Contrast	0 a 63	25	25
CONTR TXT	TXT Contrast	0 a 63	18	18
CENTR TXT	OSD and TXT Centre	0 a 3	1	0
SEMI MUTE	Attenuation (dB) by pushing Mute once	0 a 63	15	15
INI NVM	Non volatile memory initialisation	-	-	-
FFI	PLL constant time of IF	ON/OFF	OFF	OFF
SCS	SCART connectors interchange	ON/OFF	OFF	Equals the OSD with the back cover label
CMB	Enable/Disable the Comb Filter	ON/OFF	OFF	ON in models with Comb-Filter OFF in models without Comb-Filter
TXEAST	Eastern characters set	ON/OFF	OFF	OFF
DSA	Skin tone correction angle	ON/OFF	OFF	OFF
OSO	HV discharge mode	ON/OFF	OFF	ON
OEM	TV set trade-mark	ON/OFF	OFF	OFF in SANYO models ON in SONITRON models
16:9	16:9 picture configuration	ON/OFF	OFF	OFF
PAL B/G	PAL B/G Configuration	ON/OFF	ON	ON
PAL D/K	PAL D/K Configuration	ON/OFF	ON	OFF
PAL I	PAL I Configuration	ON/OFF	OFF	OFF
SECAM B/G	SECAM B/G Configuration	ON/OFF	OFF	OFF in PAL models ON in SECAM models
SECAM D/K	SECAM D/K Configuration	ON/OFF	OFF	OFF
SECAM L	SECAM L Configuration	ON/OFF	OFF	OFF
NTSC BG	NTSC 4.43MHz Configuration	ON/OFF	ON	ON
NTSC M	NTSC 3.58MHz Configuration	ON/OFF	OFF	OFF (imperative)
V-STAT	Video processor status	-	-	-
S-STAT	Sound processor status	-	-	-
I2C BUS	I^2C Bus stop	-	-	-

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7. ADJUSTMENTS AND REPAIR PROCEDURES

ADJUSTMENT	SIGNAL	CONDITIONS	TEST POINTS	ADJUSTMENT POINT	ADJUSTMENT PROCEDURE	INSTRUMENTS
Power supply	Philips pattern	Picture: Normalised Sound: Minimum volume	B1 Cathode D850	VR800	Adjust to obtain: 150V ± 0.5V in CRTs Philips A59/A66EAK071X11 (N1) 146V ± 0.5V in CRTs Videocolor A59/A66EHJ43X38 150V ± 0.5V in CRTs Panasonic A59/A66ECF50X05 119V ± 0.5V in CRTs Philips A51EAL155X10/X11	Voltmeter DC Resolution >0,1V
AGC	UHF Band middle channel (CH25)	Aerial signal level: 60dBuV (1mVrms)	Pin 1 of TU250 (AGC)	SERVICE/VIF/AGC	Adjust to obtain 3,3V ±0,2V	Voltmeter DC Resolution >0,1V
Sound IF	Any picture		Pin 5 of IC1350	L1351	Adjust to obtain 2,3V ±0,15V	Voltmeter DC Resolution >0,1V
Vertical slope	Philips pattern	Picture: Normalised	CRT Screen	SERVICE/GEOMETRY/VERT SLOPE	Adjust to achieve that the centre line of the Philips pattern matches the beginning of the service blanking	Visual adjustment
Vertical centre	Philips pattern	Picture: Normalised	CRT Screen	SERVICE/GEOMETRY/VERT SHIFT	Adjust to centre the picture in vertical direction	Visual adjustment
Vertical size	Philips pattern	Picture: Normalised	CRT Screen	SERVICE/ GEOMETRY/VERT AMPLIT	Adjust just to get the checked board hidden	Visual adjustment
Horizontal centre	Philips pattern	Picture: Normalised	CRT Screen	SERVICE/ GEOMETRY/HOR SHIFT	Adjust to centre the picture in horizontal direction	Visual adjustment
Width (90°)	Philips pattern	Picture: Normalised	CRT Screen	L653	Adjust just to get the checked board hidden	Visual adjustment
Width (110°)	Philips pattern	Picture: Normalised	CRT Screen	SERVICE/ GEOMETRY/EW AMPLIT	Adjust just to get the checked board hidden	Visual adjustment
Pin Cushion (110°)	Philips pattern	Picture: Normalised	CRT Screen	SERVICE/ GEOMETRY/PARABOLA	Adjust to correct the pin cushion distortion in the way that vertical lateral lines become straight	Visual adjustment
Corner Pin Cushion(110°)	Philips pattern	Picture: Normalised	CRT Screen	SERVICE/ GEOMETRY/CORNER PAR	Adjust to correct the pin cushion distortion in the corner in the way that vertical lateral lines become straight	Visual adjustment
Trapezium (110°)	Philips pattern	Picture: Normalised	CRT Screen	SERVICE/ GEOMETRY/TRAPEZIUM	Adjust to obtain the lateral vertical lines parallel	Visual adjustment
G2	Philips pattern	Before SERVICE/G2/BRI must be: 32 on CRTs Philips A59/A66EAK071X11 5 on CRTs Videoc. A59/A66EHJ43X38 0 on CRTs Panas. A59/A66ECF50X05 0 on CRTs Philips A51EAL155X10/X11	CRT Screen	SERVICE/G2/ADJ SCREEN potentiometer	Adjust just to see the service line	Visual adjustment
White point	Philips pattern	Picture: Normalised	CRT Screen	SERVICE/WHITE/GREEN SERVICE/WHITE/RED	Adjust to obtain a white tone acceptable	Visual adjustment
Focus	Philips pattern	Picture: Normalised	CRT Screen	FOCUS potentiometer	Adjust to obtain the best possible focusing in the centre of screen	Visual adjustment
TXT centre	Philips pattern	Picture: Normalised	CRT Screen	SERVICE/MORE/CENTR TXT	Adjust to centre the OSD in the screen	Visual adjustment

Common condition to all adjustments (except AGC): The aerial signal level must be acceptable (the picture doesn't present snow degradation)
N1: 150 volts if the retrace capacitor value (C651) is 12 NF. If its value is 11 NF, the adjustment must be 148,0 volts.

PRELIMINARY

7.1. Protect modes and failure indication

The microprocessor checks periodically the different parts of the circuit and it puts the TV set in PROTECT mode if it detects any fault in a safety defined part. The error code is indicated by the red LED.
The red indicator lamp flashes every 0,3 seconds and stops while 0,7 seconds. The number of flashes depends on the error code (see table below).

Error indication	Meaning	microprocessor actions
ERROR_1	The Video Processor does not answer	The CPU puts the power supply in B_LOW situation.
ERROR_2	Vertical Deflection Fault	The CPU puts the power supply in B_LOW situation.
ERROR_3	Horizontal Deflection Fault	The CPU puts the power supply in B_LOW situation.
ERROR_4	Power Supply Short-circuit.	The CPU puts the power supply in B_LOW situation.
ERROR_5	The Sound Processor does not answer	The TV set works normally but without sound.
ERROR_6	The non volatile memory does not answer	The CPU puts the power supply in B_LOW situation.

The 1, 2, 5 and 6 error codes are read by means the I^2C Bus.
The 3 and 4 error codes are read through the CTL1, CTL2 and -PD&FAIL signals.

7.2. Protect mode inhibition

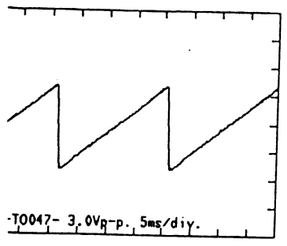
it is possible to disable the protect mode in order to facilitate the TV set repair. In the fault detection situation, by pushing the M key (PL100), the microprocessor leaves the execution of the actions that it performs in protect mode. In the ERROR_4 indication (Power Supply Short-circuit), the microprocessor always puts the power supply in B_LOW situation (the M key does not act).

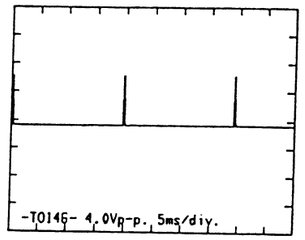
7.3. Power supply repair procedure

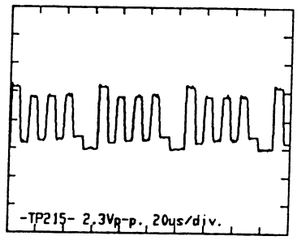
- When it is necessary to replace the IC800, it is strongly recommended to replace also the current sensor resistors R804 and R805 (they may be also damaged or altered).
- If Q850 has been shorted (collector to emitter) in order to force the B_HIGH situation, it must be opened at the end of repair procedure. Without BSYNC pulses, the microprocessor doesn't continue the start up procedure.
- Take in mind that in the case where the power supply is forced to B_HIGH situation and without current consumption at the main output (deflection stopped), the stabilised output is B6. The minimum voltage circuit is acting and B6 could go down from the nominal 10 volts to 7,5 volts approximately. Also, in this situation B1 goes up until 160 - 180 volts in TV sets with 110º CRT.

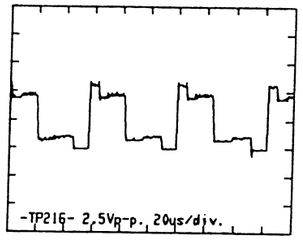
7.4. Procedure of non-volatile memory (NVM) replacement, IC125

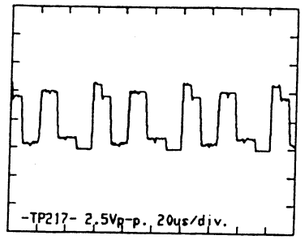
When the TV set starts up, the microprocessor checks the non volatile memory in order to know if it has been initialised. If it detects no initialisation it will continue the start up procedure with the adjustments values by defect which are in the ROM mask. This allows a correct start up. Then it is necessary to initialise the non volatile memory by acceding to the INI NVM menu in SERVICE mode. Finally the operator must adjust the other controls.

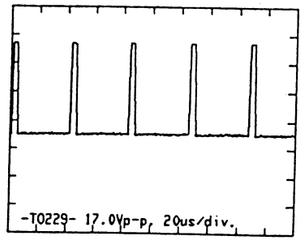

-T0047- 3.0Vp-p, 5ms/div.

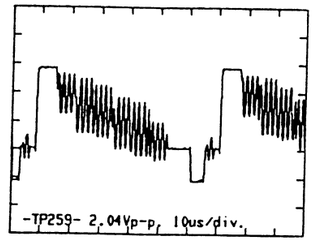

-T0146- 4.0Vp-p, 5ms/div.

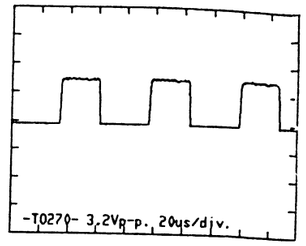

-TP215- 2.3Vp-p, 20us/div.

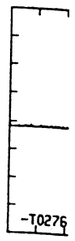

-TP216- 2.5Vp-p, 20us/div.

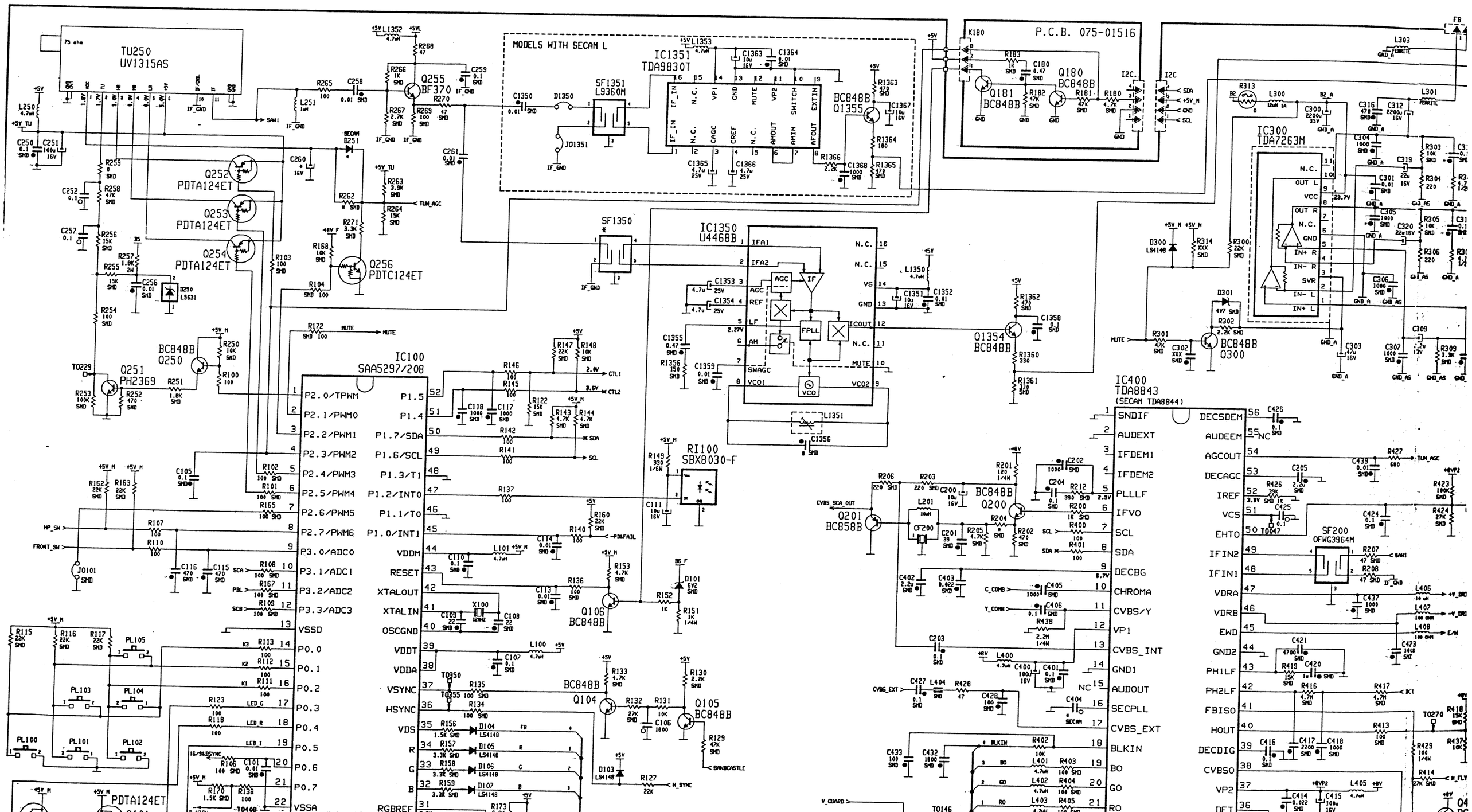

-TP217- 2.5Vp-p, 20us/div.


-T0229- 17.0Vp-p, 20us/div.


-TP259- 2.04Vp-p, 10us/div.


-T0270- 3.2Vp-p, 20us/div.


-T0276


TU250
UV1315AS
75 ohm
MODELS WITH SECAM L
IC1351
TDA9830T
SF1351
L9360M
SF1350
*
IC1350
U4468B
IC100
SAA5297/208
RI100
SBX8030-F
P.C.B. 075-01516
K180
IC300
TDA7263M
IC400
TDA8843
(SECAM TDA8844)
SF200
OFWG3964M
Q252
PDTA124ET
Q253
PDTA124ET
Q254
PDTA124ET
Q256
PDTC124ET
Q255
BF370
Q251
PH2369
BC848B
Q250
BC848B
Q1355
BC848B
Q181
BC848B
Q180
BC848B
Q1354
BC848B
Q106
BC848B
Q104
BC848B
Q105
BC848B
Q300
BC848B
Q200
BC858B
Q201
PDTA124ET
Q101
D250
L5631
D251
D1350
J01351
J0101
SMD
D103
LS4148
D104
LS4148
D105
LS4148
D106
LS4148
D107
LS4148
D101
6V2 SMD
D300
LS4148
D301
4V7 SMD
L1350
4.7uH
L1351
L1352
4.7uH
L1353
4.7uH
L250
4.7uH
L251
1uH
L100
4.7uH
L101
4.7uH
L300
12uH 1A
L303
FERRITE
L301
FERRITE
L404
L405
4.7uH
L406
10 uH
L407
100 ohm
L408
100 ohm
X100
12MHz
T0350
T0355
T0360
T0400
T0146
T0270
T0047
SAW1
SAW2
IF_GND
GND_A
GND_AS
+5V
+5V_TU
+5V_M
+8V
+8V_F
+8VP2
B6_F
B2_A
B2_F
FB
SCA
SCB
PBL
MUTE
CTL1
CTL2
SDA
SCL
H_SYNC
V_GUARD
TUN_AGC
P_BUFFAIL
CVBS_SCA_OUT
CVBS_EXT
Y_COMB
C_COMB
HP_SW
FRONT_SW
LED_G
LED_R
LED_I
B_HIGH
16:9LBSYNC
R
G
B
RGBREF
VSYNC
HSYNC
VDS
VSSD
VSSA
P0.0
P0.1
P0.2
P0.3
P0.4
P0.5
P0.6
P0.7
P1.5
P1.4
P1.7/SDA
P1.6/SCL
P1.3/T1
P1.2/INT0
P1.1/T0
P1.0/INT1
P2.0/TPWM
P2.1/PWM0
P2.2/PWM1
P2.3/PWM2
P2.4/PWM3
P2.5/PWM4
P2.6/PWM5
P2.7/PWM6
P3.0/ADC0
P3.1/ADC1
P3.2/ADC2
P3.3/ADC3
VDDM
RESET
XTALOUT
XTALIN
OSCGND
VDDT
VDDA
SNDIF
AUDEXT
IFDEM1
IFDEM2
PLLLF
IFVO
SCL
SDA
DECBG
CHROMA
CVBS/Y
VP1
CVBS_INT
GND1
AUDOUT
SECPLL
CVBS_EXT
BLKIN
BO
GO
RO
DECSDEM
AUDEEM
AGCOUT
DECAGC
IREF
VCS
EHTO
IFIN2
IFIN1
VDRA
VDRB
EWD
GND2
PH1LF
PH2LF
FBISO
HOUT
DECDIG
CVBSO
VP2
DET
N.C.
OUT L
VCC
OUT R
GND
IN+ R
IN- R
SVR
IN- L
IN+ L
23.7V
IF_IN
VP1
GND
MUTE
VP2
SWITCH
EXTIN
CAGC
CREF
AMOUT
AMIN
AFOUT
IFA1
IFA2
AGC
REF
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AM
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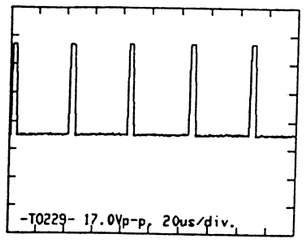
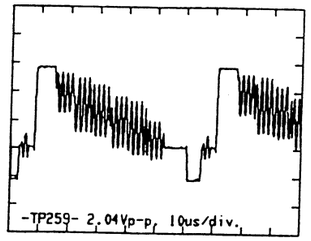
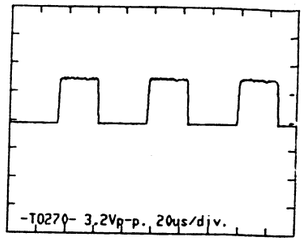
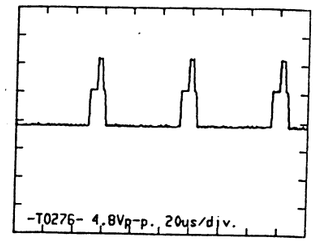
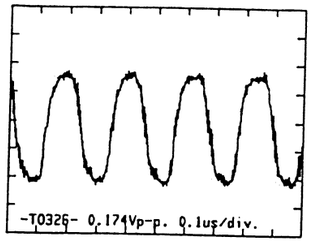
FPLL
VCO
I2C
SDA
+5V_M
GND
SCL

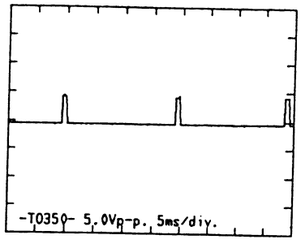


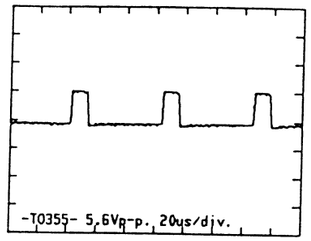


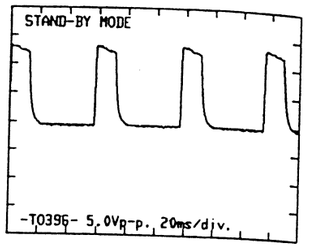












P.C.B. 075-01516

P.C.B. 075-01508

IC300 TDA7263M

IC400 TDA8843 (SECAM TDA8844)

IC1050 SAA4960

IC350 TDA2822M

IC900 LA7221

Q0354 BC848B

Q0200 BC848B

Q0300 BC848B

Q0902 BC848B

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Q0903 BC858B

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Q0351 PDTC124ET

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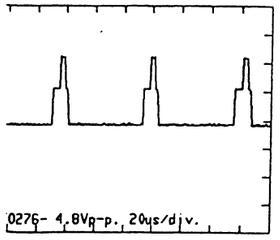
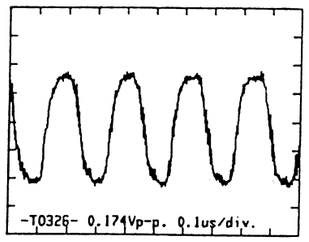
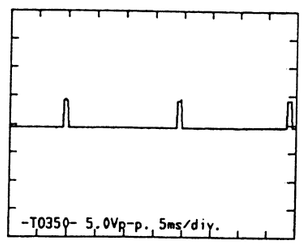
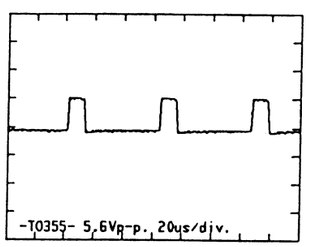
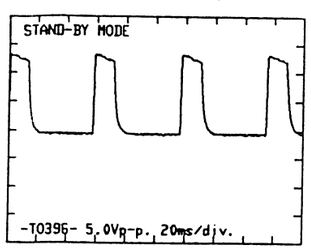
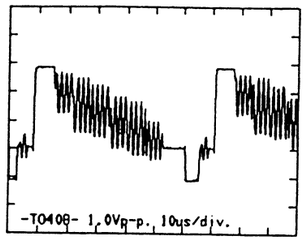


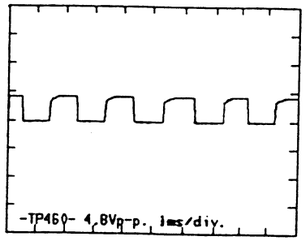


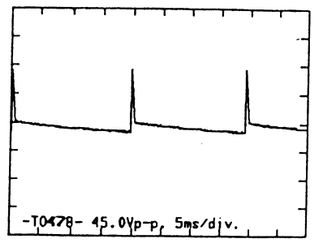


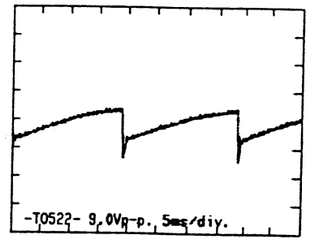


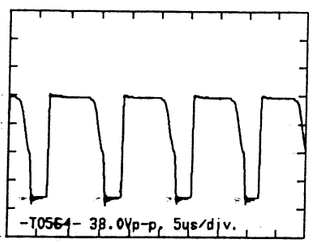


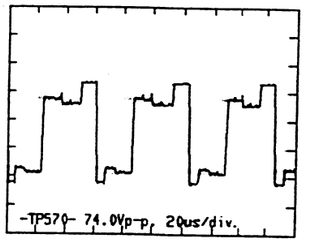


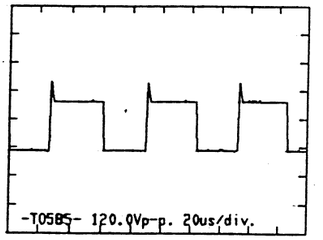


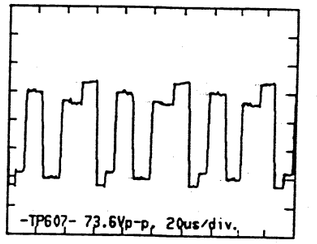


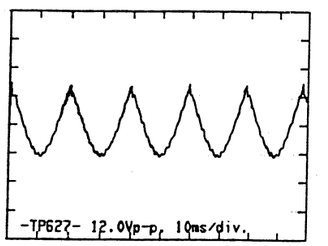


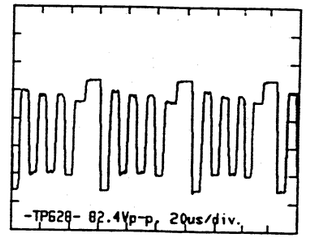


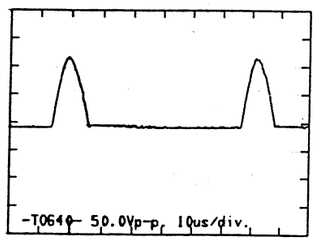


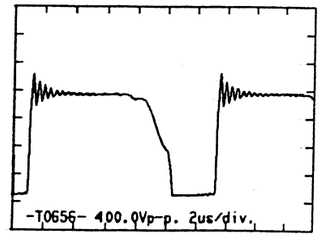


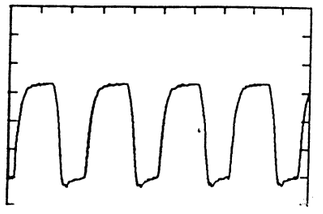












P.C.B. 075-01508

IC350 TDA2822M

IC900 LA7221

IC1050 SAA4960

Q902 BC848B

Q901 BC848B

Q900 BC848B

Q903 BC858B

Q350 PDTC124ET

Q351 PDTC124ET

Q400 BC848B

S902 RCA

S300

S901 SCART_B

S900 SCART_A

MONO_IN

K9C

K9B

K9A

MODELS WITH

WARNING !!!

P2.1/PWM0
P2.2/PWM1
P2.3/PWM2
P2.4/PWM3
P2.5/PWM4
P2.6/PWM5
P2.7/PWM6
P3.0/ADC0
P3.1/ADC1
P3.2/ADC2
P3.3/ADC3
VSSD
P0.0
P0.1
P0.2
P0.3
P0.4
P0.5
P0.6
P0.7
VSSA
CVBS0
CVBS1
BLACK
IREF
P1.4
P1.7/SDA
P1.6/SCL
P1.3/T1
P1.2/INT0
P1.1/T0
P1.0/INT1
VDDM
RESET
XTALOUT
XTALIN
OSCGND
VDDT
VDDA
VSYNC
HSYNC
VDS
R
G
B
RGBREF
P3.4/PWM7
-COR
VSSD
FRAME
RI100
SBX8030-F
IC125
SLA24C08-S
PDTA124ET
Q100
Q101
LED-3MM-BICOLOR
Q102
BC848B
Q104
Q105
Q106
BC858B
Q200
Q201
SF200
OFWG3964M
T0047
SNDIF
AUDEXT
IFDEM1
IFDEM2
PLLLF
IFVO
SCL
SDA
DECBG
CHROMA
CVBS/Y
VP1
CVBS_INT
GND1
AUDOUT
SECPLL
CVBS_EXT
BLKIN
BO
GO
RO
BCLIN
RI
GI
BI
RGBIN
LUMIN
LUMOUT
DECSDEM
AUDEEM
AGCOUT
DECAGC
IREF
VCS
EHTO
IFIN2
IFIN1
VDRA
VDRB
EWD
GND2
PH1LF
PH2LF
FBISO
HOUT
DECDIG
CVBSO
VP2
DET
XTAL2
XTAL1
REFO
RYI
BYI
RYO
BYO
IC800
STR-F6653
IC830
TLP160J
IC801
TCET1101
IC850
TL431
IC851
IC852
L7805
IC853
KA78R08
IC854
KA78R05
Q832
BC858B
Q831
Q830
Q852
BC848B
Q857
PDTC124ET
Q858
Q853
Q854
Q855
Q700
Q601
Q600
KSP42
Q673
Q650
S2055N
IC701
TDA83500
DRIVER
T600
T800
FC DEGAUSSING COIL
FE 220V
TR830
TRIAC
PTC800

IC400
TDA8843
(SECAM TDA8844)

SNDIF
AUDEXT
IFDEM1
IFDEM2
PLLLF
IFVO
SCL
SDA
DECBG
CHROMA
CVBS/Y
VP1
CVBS_INT
GND1
NC
AUDOUT
SECPLL
CVBS_EXT
BLKIN
BO
GO
RO
BCLIN
RI
GI
BI
RGBIN
LUMIN
LUMOUT

DECSDEM
AUDEEM
AGCOUT
DECAGC
IREF
VCS
EHTO
IFIN2
IFIN1
VDRA
VDRB
EWD
GND2
PH1LF
PH2LF
FBISO
HOUT
DECDIG
CVBSO
VP2
DET
XTAL2
XTAL1
REFO
RYI
BYI
RYO
BYO

IC1050
SAA4960

FSC
i.c.
BYP
i.c.
REFBP
SSYN
VCCA
VCCO
AGND
CEXT
OGND
CO
FSCSW
YO

i.o.
VCCPLL
PLLGND
COMBENA
REFDL
n.c.
VDDD
DGND
n.c.
CSY
LPFION
YEXT/CVBS
i.o.
CVBSO

IC500
TDA6107Q

VI2 GND VDD VO2
VI1 VI3 IOM VO3 VO1

IC701
TDA8350Q

I_I(SET)
I_I(CORR)
V_O(SINK)
V_O(GUARD)
V_O(A)
V_FB
GND
N.C.
V_O(B)

T650
HFT426M

H.V.
FOCUS
G2
FH
FH-
FD
FD-

DRIVER
T600

IC851
*

IC853
KA78R08

Q350
PDTC124ET

Q351
PDTC124ET

BC858B
Q903

Q900
BC848B

Q200
BC848B

Q0201
BC858B

Q202
BC858B

Q203
BC848B

Q400
BC848B

Q0276

Q0270

Q0278

Q0276

Q0280

Q0282

Q0284

Q0286

Q0288

Q0290

Q0292

Q0294

Q0296

Q0298

Q0300

Q0302

Q0304

Q0306

Q0308

Q0310

Q0312

Q0314

Q0316

Q0318

Q0320

Q0322

Q0324

Q0326

Q0328

Q0330

Q0332

Q0334

Q0336

Q0338

Q0340

Q0342

Q0344

Q0346

Q0348

Q0350

Q0352

Q0354

Q0356

Q0358

IC900
LA7221

IC1050
SAA4960

MODELS WITH COMB-FILTER

* MODELS WITHOUT COMB-FILTER

T650
HFT426M

IC500
TDA6107Q

P.C.B. 075-01510

SCART_A
S900

Z1
ZOCALO

WARNING !!!
DO NOT JOIN THE INPUT POWER LINE TO GROUND THROUGH THE OSCILLOSCOPE

-TP607- 73.6Vp-p, 20us/div.

-TP627- 12.0Vp-p, 10ms/div.

-TP628- 82.4Vp-p, 20us/div.

-TP646- 50.0Vp-p, 10us/div.

-TP656- 400.0Vp-p. 2us/div.

-TP683- 3.8Vp-p. 5us/div.

STAND-BY MODE

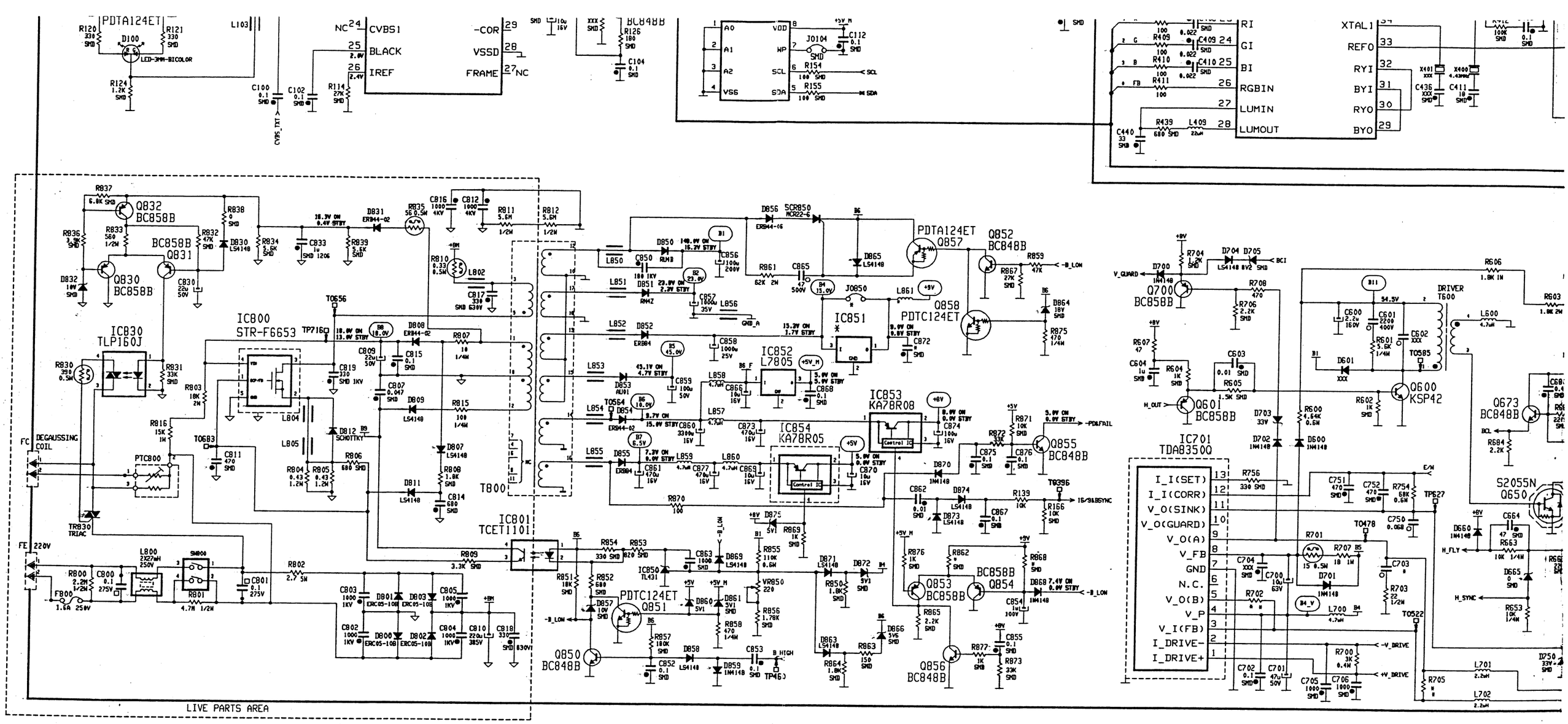
-TP716- 5.0Vp-p. 20us/div.

-TP714- 1200.0Vp-p. 10us/div.

POSICION LOCATION \ TUBO CRT	A59EAK071X11 A66EAK071X11	A59ECF50X05 A66ECF50X05	A59EHJ43X38 A66EHJ43X38
+B1	+148V	+150V	+148V
C703	220nF	220nF	100nF
D656	15V	15V	--
D657	1N4148	1N4148	--
L650	--	--	25uH
R659	1KΩ	1KΩ	--
R702	0.68Ω 5% 0.6W	0.75Ω 5% 0.6W	0.82Ω 5% 0.6W
R705	330Ω 1W	180Ω 2W	1K5Ω 1/2W
C651	11nF 1.6KV	12nF 1.6KV	11nF 1.6KV
R655	3.9Ω 2W	3.9Ω 2W	--

SISTEMA SYSTEM \ POSICION LOCATION	B/G	D/K-B/G
CF200	TPS5.5MB	TPWA02B
SF1350	G9251M	K9260M
R204	270Ω	220Ω

OPCION OPTION \ POSICION	CON A3DS	SIN A3DS
	WITH A3DS	WITHOUT A3DS
R1050	47	0



SANYO

COLOUR TELEVISION 25"/28"

Models: CE25FN1 CE25FA1 CE25FS1
CE25GN1 CE25GS1 CE25EN2
CE28FN1 CE28FA1 CE28FS1
CE28GN1 CE28GS1 CE28EN2
CE25FN1-E CE28FN1-E CE28GA1-P

Chassis:2103 (Series EB5-A)

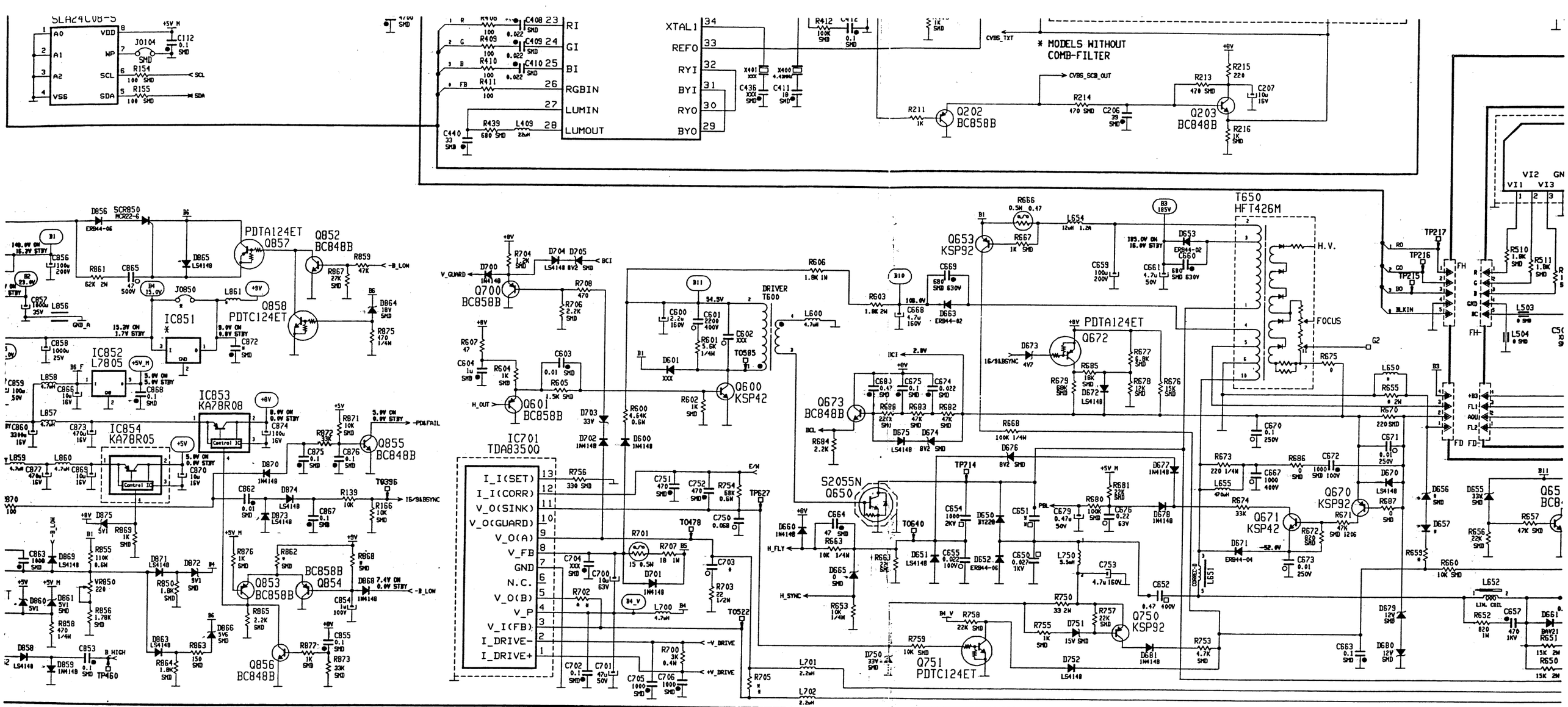
COMPLIANCE TO STANDARDS

When any TV receptor component is substituted, it is necessary to check the list of components in the Service Manual and all of those marked with * or ⚠ must be replaced with original spare SANYO parts

WARNING! This TV set contains components which are particulary sensitive to static electricity (ESD). It is recomended that all due precaution be taken handling integrated circuits and semiconductors.

NOTES:

1.-Resistor values are expressed in Ohms
K = 1000 , M = 1000000 .
2.-Capacitor values lower than 1 are expressed in uF and values higher than 1 are expressed in pF.
3.-The information in this scheme is correct at the beginning of the series; SANYO reserves the right to modify this in accordance with on-going product improvement policy.
4.-The measurements of voltages and oscillograms were carried out with a TV set tuned to channel-21, normal adjustments and colour bar pattern.



COMPLIANCE TO STANDARDS

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NOTES:

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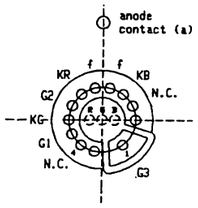
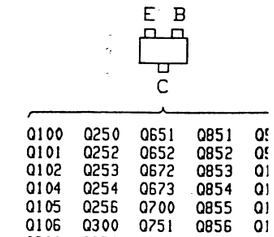
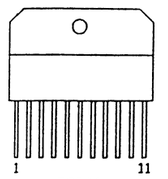


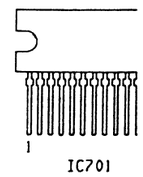
A59EAK071X11
A66EAK071X11
A59ECF50X05
A66ECF50X05
A59EHJ43X38
A66EHJ43X38



Q100	Q250	Q651	Q851	Q9
Q101	Q252	Q652	Q852	Q9
Q102	Q253	Q672	Q853	Q1
Q104	Q254	Q673	Q854	Q1
Q105	Q256	Q700	Q855	Q1
Q106	Q300	Q751	Q856	Q1
Q200	Q350	Q830	Q857	
Q201	Q351	Q831	Q858	
Q202	Q400	Q832	Q900	
Q203	Q601	Q850	Q901	



IC300



IC701

* MODELS WITHOUT COMB-FILTER

CVBS_TXT

CVBS_SCB_OUT

Q202 BC858B

Q203 BC848B

P.C.B. 075-01510

IC500 TDA6107Q

T650 HFT426M

Q653 KSP92

PDTA124ET Q672

Q670 KSP92

Q671 KSP42

Q651 BC848B

Q652 BC848B

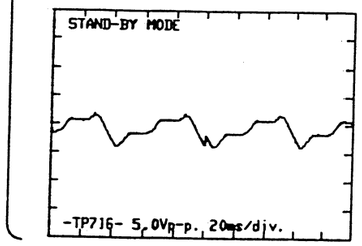
Q750 KSP92

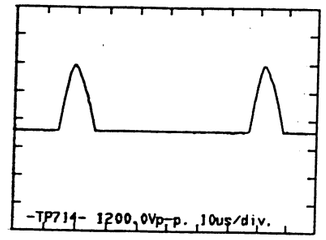
Q751 PDTC124ET

DEFLECTION YOKE

Z1 ZOCALO

DO NOT JOIN THE INPUT POWER LINE TO GROUND THROUGH THE OSCILLOSCOPE



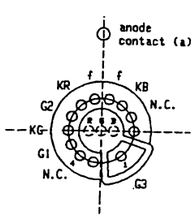


SISTEMA SYSTEM / POSICION LOCATION	B/G	D/K-B/G
CF200	TPS5.5MB	TPWA02B
SF1350	G9251M	K9260M
R204	270Ω	220Ω

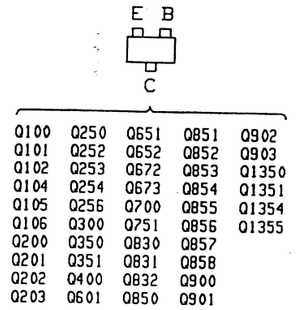
TUBO CRT / POSICION LOCATION	A59EAK071X11 A66EAK071X11	A59ECF50X05 A66ECF50X05	A59EHJ43X38 A66EHJ43X38
+B1	+148V	+150V	+148V
C703	220nF	220nF	100nF
D656	15V	15V	--
D657	1N4148	1N4148	--
L650	--	--	25uH
R659	1KΩ	1KΩ	--
R702	0.68Ω 5% 0.6W	0.75Ω 5% 0.6W	0.82Ω 5% 0.6W
R705	330Ω 1W	180Ω 2W	1K5Ω 1/2W
C651	11nF 1.6KV	12nF 1.6KV	11nF 1.6KV
R655	3.9Ω 2W	3.9Ω 2W	--

OPCION OPTION / POSICION LOCATION	SIN SECAM L WITHOUT SECAM L	CON SECAM L WITH SECAM L
IC400	TDA8843	TDA8844
C404	--	220nF
R262	JUMPER	10KΩ
D251	--	LS4148
C260	22uF	47uF

OPCION OPTION / POSICION LOCATION	CON A3DS WITH A3DS	SIN A3DS WITHOUT A3DS
IC851	LM78L09	--
J0850	--	JUMPER
L861	100uH	JUMPER
R311	4K7Ω	12KΩ
R312	4K7Ω	12KΩ
C872	100nF	--
R862	3K3Ω	5K6Ω
R868	56KΩ	100KΩ



A59EAK071X11
A66EAK071X11
A59ECF50X05
A66ECF50X05
A59EHJ43X38
A66EHJ43X38



Q100	Q250	Q651	Q851	Q902
Q101	Q252	Q652	Q852	Q903
Q102	Q253	Q672	Q853	Q1350
Q104	Q254	Q673	Q854	Q1351
Q105	Q256	Q700	Q855	Q1354
Q106	Q300	Q751	Q856	Q1355
Q200	Q350	Q830	Q857	
Q201	Q351	Q831	Q858	
Q202	Q400	Q832	Q900	
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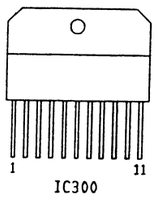

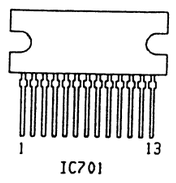

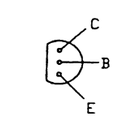

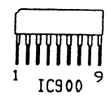

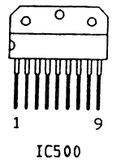

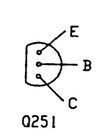

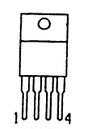

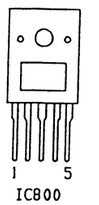

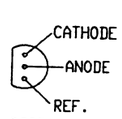

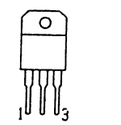

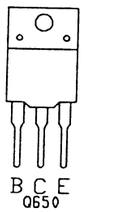

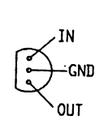

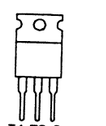

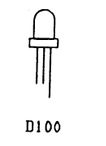

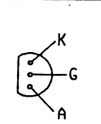

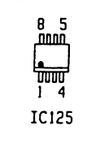

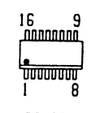

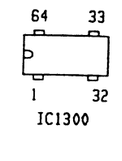

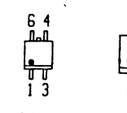

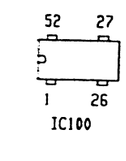

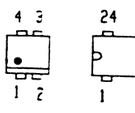

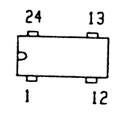

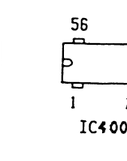

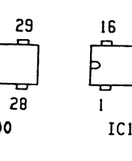

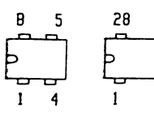

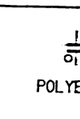

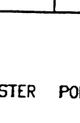

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